

MIC definitions – last edit 4-10-12

Above-Grade – means a soil dispersal system where the entire infiltrative surface is located above natural ground surface elevation.

Agency – means the department of environmental quality, a city health department, a county health department, or a district health department, whichever has jurisdiction.

Alternative System – means a treatment and soil dispersal system which is not a conventional system and provides for an equivalent or better degree of protection for public health and the environment than a conventional system.

Aquifer – means a subsurface water-bearing geologic material that transmits water in sufficient quantities to supply a well.

At-Grade – refers to a soil dispersal system where the infiltrative surface is located at the natural ground surface elevation.

Authorized Local Health Department – a city health department, county health department, or district health department whom has been granted authority to administer these criteria by the DEQ.

Bedrock – means consolidated and continuous geologic material, such as limestone, dolomite, shale, sandstone, basalt or granite.

Below-Grade – refers to a soil dispersal system where the infiltrative surface is below the natural ground surface elevation.

BOD5 – means the quantitative measure of the amount of oxygen consumed by bacteria while stabilizing, digesting, or treating biodegradable organic matter under aerobic conditions over a five-day incubation period; expressed in milligrams per liter (mg/L).

Certified Operator – means a municipal wastewater operator certified under Part 41, Sewerage Systems, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended and/or an industrial/commercial wastewater operator certified under Part 31, Industrial and Commercial Waste Treatment Facilities, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Community On-Site Wastewater System – means a sewerage system that collects, conveys, transports, treats, or otherwise handles sanitary sewage for more than one individually owned family unit or dwelling or more than one individually owned business.

Competent Professional – means an individual who can demonstrate the knowledge, skills, and abilities necessary to perform specific functions under the criteria.

Competent Soil Evaluator – means an individual who can demonstrate the knowledge, skills, and abilities necessary to conduct and report soil evaluations based upon the United States Department of Agriculture (USDA) classification system pursuant to these criteria.

Confining Layer – means geologic material which has a low hydraulic conductivity which impedes or prevents vertical groundwater movement.

Confining Layers of Sufficient Areal Extent – means the presence of contiguous/continuous confining layers in an area proposed for soil dispersal sufficient to protect a drinking water aquifer.

Conventional System – means an on-site wastewater treatment and soil dispersal system that contains a watertight septic tank with non-uniform distribution of effluent to subsurface soil trenches or an absorption bed.

DEQ – means the Michigan Department of Environmental Quality.

Direct Hydraulic Connection – means a condition where wastewater effluent is dispersed into permeable soils that provide a direct conduit to an aquifer that is used or intended to be used for drinking water purposes.

Dispersal System – means a system used for the subsurface distribution of wastewater effluent to soil.

Disturbed Soil – means a soil layer that has been changed from its natural condition by excavation or other activities such as soil compaction, removal and smearing.

Domestic Equivalent Wastewater – means wastewater that falls outside the definition of sanitary sewage but which has similar wastewater characteristics and is amenable to on-site wastewater treatment and subsurface soil dispersal.

Enhanced Treatment – means the biological and physical/chemical treatment of filtered septic tank effluent to reduce the amount of biochemical oxygen demand (BOD₅), total suspended solids (TSS) or nutrients including phosphorous and nitrogen prior to discharge to a soil dispersal system.

Established 100-Year Floodplain – means the area of land adjoining surface water which will be inundated by a 100-year flood.

Existing Water Well Records – means the available water well construction information (private residential, public, irrigation, industrial and test wells) in the vicinity of the area being evaluated for on-site wastewater treatment and soil dispersal.

Facility – means a structure generating wastewater that discharges to an on-site treatment and soil dispersal system.

FOG – means fats, oils and greases, the constituents of sewage typically originating from foodstuffs (animal fats or vegetable oils) or consisting of compounds of alcohol or glycerol with fatty acids (soaps and lotions), typically measured in milligrams per Liter (mg/L).

Fragipan – means a loamy, brittle subsurface horizon low in porosity and content of organic matter and low to moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Groundwater – means the water in the ground that is in the zone of saturation.

Groundwater Flow – means the directional movement of groundwater travelling through soil and/or rock.

Groundwater Mounding – means the localized increase in the elevation of a water table resulting from the downward percolation of additional liquid toward groundwater.

Groundwater Venting – means the recharging of surface water by groundwater.

High Groundwater Elevation - means the uppermost part of the soil or underlying material wholly saturated with water. The term includes perched and apparent conditions that are seasonally saturated for a time period in excess of two weeks, or permanently saturated.

High Strength Waste – means wastewater influent that contains amounts of fats, oils, and greases (FOG), organic loading, suspended solids or nutrients that exceed typical concentrations of residential wastewater influent. It can also mean the wastewater contains high amounts of certain chemicals, such as disinfectants, cleaning products or pharmaceuticals.

Hydraulic Loading Rate – means the volume of wastewater effluent that can be applied per unit time per unit area of infiltrative surface, e.g. gallons per day per square foot (gpd/ft²). The hydraulic loading rate varies based upon soil texture, structure and wastewater effluent strength.

Infiltrative Surface – means the designated interface where effluent moves from distribution media or a distribution device into treatment media.

Linear Loading Rate – means the quantity of effluent applied along the length of a soil dispersal component typically expressed as volume per unit length per unit time (e.g. gallons per foot per day).

Native Soil/Natural Soil – means the top layer of the earth's surface, consisting of rock and mineral particles, often mixed with organic matter and unaltered by mechanical processes (excluding accepted agricultural practices).

On-Site Wastewater Treatment System – means a system of components used to collect and treat sewage from one or more dwellings, buildings, or structures and discharge the resulting effluent to a soil dispersal system on property owned by the individual or entity.

Ordinary High Water Mark – means the line between upland and bottomland that persists through successive changes in water level, below which the presence and action of the water is so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil, and the vegetation. On an inland lake that has a level established by law, it means the high established area. Where water returns to its natural level as a result of the permanent removal or abandonment of a dam, it is the natural ordinary high-water mark.

Organic Loading – means Biodegradable fraction of chemical oxygen demand (biochemical oxygen demand, biodegradable fats, oils and greases (FOG), and volatile solids) delivered to a treatment component in a specified time interval expressed as mass per time or area; e.g., pounds per day or pounds per cubic foot per day (pretreatment); pounds per square foot per day (infiltrative surface or pretreatment).

Permanent Reference Point – means a reference point that once identified is used as a point of reference for one or more components of an installed on-site wastewater treatment system and one which expected to be present throughout the life of the component(s).

Permeability – means the ability of a porous medium such as soil to transmit fluids (liquids or gases).

Private Practice – means conduct of activities by a competent professional whom is not an employee of the agency.

Professional Engineer – means a professional engineer who is licensed under Article 20 of the occupational code, Act 299 of the Public Acts of 1980, being §§399.2001 to 399.2014 of the Michigan Compiled Laws and whom is not an employee of the department.

Public Sanitary Sewer System – means a sewerage system as defined in section 4101 of Act No. 451 of the Public Acts of 1994, as amended, being §324.4101 of the Michigan Compiled Laws. Public sewerage systems are generally those that collect and treat sanitary sewage generated by 2 or more dwellings or structures not under the same ownership.

Redoximorphic Feature – spots or blotches of contrasting colors, such as, but not limited to, gray or brown or gray and brown colors in close proximity, which results from the reduction and oxidation of iron and manganese compounds in the soil after periodic saturation with water.

Registered Sanitarian – means a person that is registered under part 184 of Act No. 368 of the Public Acts of 1978, being §333.18401 of the Michigan Compiled Laws and whom is not an employee of the department.

Reliable Reference Point – is one of a permanent nature expected to be present at the time of the soil dispersal system installation and one which can be reestablished in the field.

Reserve Area – means the area of land with demonstrated capacity for use as a final treatment and soil dispersal component upon which no permanent structure should be constructed and which is intended for replacement of the initial system.

Residence Time – the amount of time necessary for wastewater to be retained in the treatment process in order to achieve the desired level of biological, chemical and/or physical treatment.

Restrictive Soil Horizon – Horizon or condition in the soil profile or underlying strata that restricts movement of fluids; a restrictive layer may constitute a limiting soil/site condition; examples include fragipan, spodic horizons, massive structural grade, or certain bedrock, etc.

Sanitary Sewage/Sanitary Wastewater – means water and contaminants discharged from sanitary conveniences, including bathroom, kitchen, and household laundry fixtures of dwellings, office buildings, industrial plants, commercial buildings, and institutions. Commercial laundry wastes and industrial and commercial processes are not considered sanitary sewage.

Soil Mottling – see redoximorphic features.

Soil Texture – means the United States department of agriculture (USDA) classification system and refers to the coarseness or fineness of the soil relative to the proportion of sand, silt, and clay.

Subsurface – means below the natural or altered ground surface elevation.

Surface water – means any of the following:

(i) The Great Lakes and their connecting waterways.

(ii) Inland lakes.

(iii) Rivers.

(iv) Streams.

(v) Impoundments.

(vi) Perennial open drains.

(vii) Any other watercourses within the jurisdiction of the state as defined in section 3101 of Act No. 451 of the Public Acts of 1994, as amended, being §324.3101 of the Michigan Compiled Laws.

Waters of the State – means groundwaters, lakes, rivers, and streams and all other watercourses and waters, including the Great Lakes, within the jurisdiction of this state.